

What is claimed is:

1. A telecommunications network providing non-dedicated circuit pathways between access nodes and switches in the network comprising:
- a plurality of access nodes disposed about a service area of the telecommunications network;
  - a switch pool adapted to communicate with the access nodes in order to provide access by a plurality of user terminals to services of the telecommunications network;
  - at least two gateways providing one or more connections between the access nodes and the switch pool via a plurality of circuit pathways; and
  - a gateway selection node operably coupled to the gateways and the switch pool, the gateway selection node configured to reserve and release circuit pathways as needed for use between switches of the switch pool and the access nodes.
2. The network of claim 1 wherein the switches comprise Mobile Switching Centers (MSCS).
3. The network of claim 1 wherein the access nodes comprise Base Station Controllers (BSCS).
4. The network of claim 1 wherein the access nodes comprise Radio Network Servers (RNSs).
5. The network of claim 1 wherein the gateway selection node further comprises a data structure defining relationships among gateways, access nodes, and identity codes associated with the circuit pathways.

6. The network of claim 4 wherein the data structure comprises a media gateway selection database.
7. The network of claim 1 wherein the identity codes comprise Circuit Identity Codes (CICS).
8. A method of providing non-dedicated circuit pathways between access nodes and switches in a telecommunications network having a plurality of gateways, the method comprising the steps of:
- requesting a circuit pathway between a switch and a target access node;
  - selecting a circuit pathway between the switch and target access node;
  - allocating a circuit pathway between the switch and a selected gateway;
  - allocating a circuit pathway between the selected gateway and target access node; and subsequently,
  - de-allocating the circuit pathway between the switch and selected gateway;
  - and
  - de-allocating the circuit pathway between the selected gateway and target access node.
9. The method of claim 8 wherein the steps of selecting, allocating, and de-allocating are performed dynamically.
10. The method of claim 8 further comprising the step of maintaining a media gateway selection node for selecting, allocating, and de-allocating circuit pathways.
11. The method of claim 10 further comprising the step of maintaining a switch

pool comprising the switches of the telecommunications network, the switch pool operably connected to the media gateway selection node.

12. The method of claim 10 further comprising the step of maintaining a data structure defining relationships among gateways, access nodes, switches, and identity codes.

13. A media gateway selection node for use in a telecommunications network for providing non-dedicated circuit pathways between access nodes and switches of a switch pool in the network, comprising:

means for storing and accessing data concerning media gateways, access nodes, switches, and circuit pathways of the network;

means for defining relationships among the media gateways, access nodes, switches, and circuit pathways; and

means for reserving and releasing circuit pathways as needed for use between individual switches and individual access nodes.

14. A media gateway selection node according to claim 13 wherein the data concerning media gateways, access nodes, switches, and circuit pathways, further comprises load carrying capacity.

15. A media gateway selection node according to claim 13 wherein the means for defining relationships among the media gateways, access nodes, switches, and circuit pathways is adapted to perform dynamically.

16. A media gateway selection node according to claim 13 wherein the means

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for reserving and releasing circuit pathways as needed for use between individual switches and individual access nodes is adapted to perform dynamically.

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